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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,780	09/29/2003	Takashi Kanai	F-7987	2486
28107	7590	08/25/2005	EXAMINER	
JORDAN AND HAMBURG LLP 122 EAST 42ND STREET SUITE 4000 NEW YORK, NY 10168			COMAS, YAHVEH	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/673,780

Applicant(s)

KANAI ET AL.

Examiner

Yahveh Comas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1 have been considered but are moot in view of the new ground of rejection.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 2-3 and 6 –17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claims 2 is unclear how the rotor is disposed around the coils and at the same time the coil is located around an outer circumferential part of said rotor.

Regarding claims 3 is unclear how the rotor rotates if the sleeve is projecting upwardly from the base having a rotor on an outer circumferential part of said sleeve and the coil is also on the base surrounding an outer circumferential part of said rotor. As disclosed in claim 3 no rotary part is provided.

Regarding claims 6-11, 13-17 are unclear how the back yoke is attached to a circumferential part of said coil and at the same time is supported by the hub, which also support the rotor and the sleeve. Also applicant fails to disclose how a color wheel

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is attached to the back yoke when the back yoke is attached to a circumferential part of said coil and the hub, as claimed in claim 6, or a color wheel attached to a sleeve when said sleeve is attached to the base, as claimed in claim 16.

Regarding claim 10 applicant fails to disclose how the color wheel is attached to the sleeve when said sleeve is on an outer circumferential part of said shaft and supported by the hub.

Regarding claims 12 applicant fails to disclose how the back yoke is attached to the base and at the same time is supported by the hub, which also support the rotor and the sleeve.

Regarding claim 15, applicant fails to disclose a color wheel attached to an outer circumferential part of the sleeve wherein said sleeve is around the shaft, is supported by a hub and has a back yoke attached to another outer circumferential.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 17 recites the limitation "back shaft" in page 17. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation "said hub" in page 18. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al.

U.S. Patent No. 4805972.

Tanaka discloses a base, a shaft projecting from said base at a point adjacent central portion of said base (10), a sleeve 24 on an outer circumferential part of the said shaft, a gas-containing volume between said sleeve and said outer circumferential part of said shaft, defining an aerodynamic bearing, a rotor (42) on said outer circumferential part of said sleeve (24), a hub disposed against the upper portion of said rotor, a plurality of permanent magnets on said rotor, and a coil on said base and surrounding an outer circumferential part of said rotor.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Ackermann et al. U.S. Patent No. 5714828.

Ackermann discloses a base (3), a shaft (2) projecting from said base (3) at a point adjacent central portion of said base (3), a sleeve on an outer circumferential part of the said shaft (3), a gas-containing volume between said sleeve and said outer circumferential part of said shaft (3), defining an aerodynamic bearing, a rotor (7) on said outer circumferential part of said sleeve, a hub disposed against the upper portion of said rotor, a plurality of permanent magnets on said rotor, and a coil (9) on said base and surrounding an outer circumferential part of said rotor (7).

Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al. U.S. Patent No. 6271612.

Tanaka discloses a base (11), a shaft (13) projecting from said base (11) at a point adjacent central portion of said base (11), a sleeve on an outer circumferential part of the said shaft (13), a coil (9) disposed on said base, said coil surrounding an outer circumferential part of said sleeve said coil being disposed axially collinear with said sleeve, a rotor on an outer circumferential part of said coil, a plurality of permanent magnets (10) on said rotor, and a hub (14) supporting said sleeve (12) and said rotor, said hub covering an upper portion of said shaft (13) such that the coil locates around an outer circumferential part of said rotor.

Claim 3 is rejected under 35 U.S.C. 102(a) as being anticipated by Nishimura et al. U.S. Publication No. 20030048575.

Nishimura discloses a base, a sleeve (8) projecting from said base, a shaft positioned in said sleeve (8), a gas volume, between said shaft and said sleeve (8), defining an aerodynamic bearing, a rotor around said sleeve (8) attached to a hub, a plurality of permanent magnets (20) on said rotor, and a stator coil (14) on the base and surrounding an outer circumferential part of said rotor.

Claim 3 is rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al. U.S. Patent No. 6071014.

Lee discloses a base, a sleeve (166f) projecting from said base, a shaft positioned in said sleeve (166f), a gas volume, between said shaft and said sleeve (166f), defining an aerodynamic bearing, a rotor around said sleeve (166f) attached to a

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hub, a plurality of permanent magnets (174f) on said rotor, and a stator coil (176f) on the base and surrounding an outer circumferential part of said rotor.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ackermann et al. U.S. Patent No. 5714828 in view of Tanaka U.S. Patent No. 5683183.

Ackermann discloses the claimed invention except for the hub covering an upper portion of the shaft. However, Tanaka discloses the use of a hub with a covering upper portion of the shaft in order to form a thrust dynamic pressure bearing, which receives axial load.

Therefore it would have been obvious to one having skill in the art at the time the invention was made to provide a hub covering an upper portion of the shaft as disclosed by Tanaka since that would have been desirable in order to provide a thrust dynamic pressure bearing, which receives axial load.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ackermann et al. U.S. Patent No. 5,714,828 in view of Tanaka U.S. Patent No. 5,683,183 and in further view of Sung et al. 6,618,214.

Ackermann discloses the claimed invention except for a color wheel attached to one of the hub and back yoke. However, Sung discloses a color wheel attached to one of the rotor for use in a projection display system.

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify Ackermann's invention and provide a color wheel attached to one of the rotor hub as disclosed by Sung since that would have been desirable to use said color wheel in a projection display system.

Claim 6-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ackermann et al. U.S. Patent No. 5,714,828 in view of Tanaka U.S. Patent No. 5,683,183 and in view of Sung et al. 6,618,214 and in further view of Komura U.S. Patent No. 6,417,590.

Ackermann in view of Tanaka and Sung, discloses the claimed invention except for a first magnet attached to a concavity of an upper part of said shaft and a second magnet attached to an upper portion of said shaft, which acts as a brake for said first magnet. However Komura discloses a first magnet attached to a concavity of an upper



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part of said shaft and a second magnet attached to an upper portion of said shaft in order to provide a magnetic bearing that support the weight of the hub.

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify Ackermann's invention and provide first magnet attached to a concavity of an upper part of said shaft and a second magnet attached to an upper portion of said shaft to support the weight of the hub.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. U.S. Patent No. 6071014 in view of Sung et al. 6,618,214 in further view Komura U.S. Patent No. 6,417,590.

Lee discloses the claimed invention except for a color wheel attached to one of the hub and back yoke, and a first magnet attached to a concavity of an upper part of said shaft and a second magnet attached to an upper portion of said shaft, which acts as a brake for said first magnet.

However, Sung discloses a color wheel attached to one of the rotary portion for use in a projection display system.

However Komura discloses a first magnet attached to a concavity of an upper part of said shaft and a second magnet attached to an upper portion of said shaft in order to provide a magnetic bearing that support the weight of the hub.

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify Lee's invention and provide a color wheel attached to one of the rotor hub as disclosed by Sung since that would had been desirable to use said color wheel in a projection display system, and provide first magnet attached to a

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concavity of an upper part of said shaft and a second magnet attached to an upper portion of said shaft to support the weight of the hub.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukita et al. U.S. Patent No. 5,831,363 in view of Sung et al. 6,618,214.

Fukita discloses a base (7), a shaft (1) projecting from said base (7) at a point adjacent central portion of said base (7), a sleeve (2) on an outer circumferential part of the said shaft, a gas-containing volume between said sleeve and said outer circumferential part of said shaft, defining an aerodynamic bearing, a rotor (6) on said outer circumferential part of said sleeve (2), a hub disposed against the upper portion of said rotor, a plurality of permanent magnets on said rotor, and a coil on said base and surrounding an outer circumferential part of said rotor (6), and a thrust washer (8) at a lower end portion of said sleeve (2).

Murabe discloses the claimed invention except for a color wheel attached to the hub. However, Sung discloses a color wheel attached to one of the rotor for use in a projection display system.

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify Ackermann's invention and provide a color wheel attached to one of the rotor hub as disclosed by Sung since that would had been desirable to use said color wheel in a projection display system.

### ***Conclusion***

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

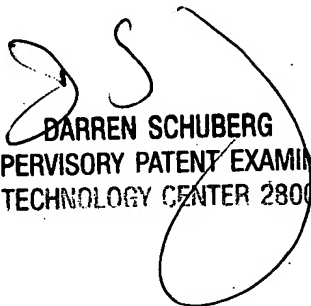
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yahveh Comas whose telephone number is (571)272-2020. The examiner can normally be reached on 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YC

  
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